UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/777,386	02/05/2001	Russell C. Hay	M00-273300	8394

22835	7590	04/08/2004

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EXAMINER
TANG, KENNETH

ART UNIT	PAPER NUMBER
2127	

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/777,386	HAY, RUSSELL C.
	Examiner	Art Unit
	Kenneth Tang	2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>05 February 2001</u>.

2a)☐ This action is **FINAL.** 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-21</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-21</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-21 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2.   Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to

particularly point out and distinctly claim the subject matter which applicant regards as the invention:

a.   In claims 1, 8 and 15, it is not made explicitly clear who or what is detecting an event that causes

a scheduling priority or who or what is calculating an updated scheduling priority.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set

forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   **Claims 1-2, 4-5, 7-9, 11-12, 14-16, 18-19, and 21 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Ogi (US 5,361,375) in view of Kraft, IV et al. (hereinafter Kraft) (US 6,091,414).

4.   As to claim 1, Ogi teaches a method for scheduling processes within an operating system based upon

virtual server identifiers, wherein the operating system supports multiple virtual servers that operate within

separate virtual environments on a single computing platform *(see Abstract)*, the method comprising:

- looking up a virtual server identifier for the process, wherein the virtual server identifier specifies a

    virtual server and an associated virtual environment that the process operates within *(col. 2, lines 26-28)*;

- using the virtual server identifier to look up a scheduling priority associated with the virtual server *(col.*

    1, lines 63-64); and

Ogi fails to explicitly teach:

- detecting an event that causes a scheduling priority for a process to be updated;

- calculating an updated scheduling priority for the process based upon the scheduling priority associated

    with the virtual server.

However, Kraft teaches using indicators to detect an event that causes a scheduling priority for a process to be

updated and the computer decides how to adjust the priority associated with the virtual server *(col. 4, lines 1-23*

and Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made

to include the feature of detecting an event that causes a scheduling priority for a process to be updated and

calculating an updated scheduling priority for the process based upon the scheduling priority associated with the

virtual server because if there is a change in scheduling parameters, there will need to be a change in respective

priorities in order to maintain accuracy.

5.   As to claim 2, Ogi in view of Kraft fails to explicitly teach wherein calculating the updated scheduling

priority involves calculating the updated scheduling priority based upon:

- a value, E, stored within a priority-related timer that keeps track of execution time for the process.

- a system priority, Sp, associated with the process; and

- the scheduling priority. M, associated with the virtual server.

However, it is well known in the art that parameters involved in altering scheduling priority associated with the

virtual server involve execution time, priority associated with the process and priority associated with the virtual

server. It would have been obvious to one of ordinary skill in the art at the time the invention was made to

include the parameters of execution time, priority associated with the process, and priority associated with the

virtual server to the existing system because these are needed for an accurate adjustment to occur.

6.   As to claim 4, it is rejected for the same reasons as stated in the rejection of claim 1.

7.   As to claim 5, Ogi in view of Kraft fails to explicitly teach wherein the method further comprises

charging a fee for hosting the virtual server, wherein the fee is based upon the scheduling priority associated

with the virtual server. However, it is well known in the art of task management to associate costs/fees with

priorities because it is a higher priority to have a lower cost for optimization purposes.

8.   As to claim 7, Ogi teaches wherein looking up the virtual server identifier for the process involves

looking up the virtual server identifier within a process structure maintained by the operating system for the

process *(col. 6, lines 22-28)*.

9.   As to claims 8 and 15, they are rejected for the same reasons as stated in the rejection of claim 1.

10.   As to claims 9 and 16, they are rejected for the same reasons as stated in the rejection of claim 2.

11.   As to claims 11 and 18, they are rejected for the same reasons as stated in the rejection of claim 4.

12.   As to claims 12 and 19, they are rejected for the same reasons as stated in the rejection of claim 5.

13.   As to claims 14 and 21, they are rejected for the same reasons as stated in the rejection of claim 7.

14.   **Claims 6, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogi (US 5,361,375) in view of Kraft, IV et al. (hereinafter Kraft) (US 6,091,414), and further in view of Ronkka et al. (hereinafter Ronkka) (US 6,631,394 B1).**

15.   As to claim 6, Kraft teaches wherein detecting the event that causes the scheduling priority for the process to be updated involves detecting one of:

-     the process entering a sleep state, the process waking up from the sleep state *(see Abstract)*; and

Ogi in view of Kraft fails to explicitly teach:

-     a priority-related timer associated with the process reaching a maximum value.

However, Ronkka teaches using a priority-related timer associated with the process reaching a maximum threshold value *(col. 24, lines 14-16)*. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the feature of a priority related timer to the existing system because it would allow the adjustment of priority to occur by a predetermined period of time.

16.   As to claims 13 and 20, they are rejected for the same reasons as stated in the rejection of claim 6.

Allowable Subject Matter

17.   Claims 3, 10, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be

directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached

on 8:30AM - 7:00PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An

can be reached on (703) 305-9678. The fax phone number for the organization where this application or

proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be obtained from

either Private PAIR or Public PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

Kt
3/24/04

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SUPERVISORY PATENT EXAMINER
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